25 and 35 years with breast cancer diagnosed either during pregnancy or immediately after delivery. Five had stage III disease, three stage II and the rest stage I. Data from estrogen and progesterone receptor assays were available for 11 of the 13: for 2 of them the results were strongly positive for both receptors; for the other 9 the results were negative for both receptors.

In a maximum follow-up period of 28 months there have been two deaths, at 22 and 26 months respectively after diagnosis; three patients have recurrent disease that is under treatment, and the other eight have either completed a year of adjuvant chemotherapy or are still receiving such treatment.

Among the seven patients with a recurrence are three whose disease recurred in the opposite breast; in one of the three the second tumour was negative for both types of hormone receptor, though the original tumour had been strongly positive for both.

These cases raise certain questions regarding breast cancer that are of concern to me:

- Why have I seen so many cases in the last 2 years in southern Alberta?
- What is the place of adjuvant chemotherapy in this situation, especially in view of the presence of a fetus?

I treated three of the women with melphalan and 5-fluorouracil, giving one course late in the second trimester. The infants were delivered early in the third trimester, and none showed evidence of toxic effects.

- Why have three of the seven recurrences been in the opposite breast, or in these cases is the disease better classified as bilateral breast cancer?
- Is breast cancer increasing in incidence in women under 35 years of age? If so, why?
- Most of the women found the tumour themselves. The delay in diagnosis ranged from a few weeks to over a year in the most recent patient.

It would be interesting to know if other physicians have encountered a similar situation and if their experience with these difficult medical problems has been similar to mine.

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## Cyanoacrylates in medicine

*To the editor:* In their letter on rapid-setting adhesive cyanoacrylates (*Can Med Assoc J* 1982; 126: 227, 228) Drs. Blais and Campbell draw attention to properties of and adverse tissue reactions to these adhesives, which are sometimes used in medicine. They point out that methyl methacrylate is sometimes added to cyanoacrylate preparations to improve handling characteristics and mechanical properties. The complications caused by methyl methacrylate warrant comment.

Methyl methacrylate has been used extensively in orthopedic surgery. Its immediate effects on the patient under anesthesia include hypotension[1-4] and arterial hypoxemia,[3,4] and it has been implicated in cardiac arrest.[5,6] It may also cause delayed hypoxemia — that occurring a few hours postoperatively.[7] In view of the potential hazards of this compound, close monitoring of the patient's vital signs and hydration status is essential when an adhesive to which it has been added is applied.

As Blais and Campbell rightly warn, "the medical use of common industrial and consumer grades of adhesives of largely unknown composition...seems both unwise and unnecessary".

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## Sex education: the physician's role

*To the editor:* In a letter to the editor (*Can Med Assoc J* 1982; 126: 1026, 1031) Dr. Andrew Murray quotes an article by Dr. Carol Nadelson to support his point that "there *is* evidence...that sex education in schools does not help reduce the incidence of teenage pregnancy". I reviewed this particular article and feel that Murray has taken liberty in quoting Nadelson to support his position. In fact, Nadelson's comments support the view of Dr. T. Johnstone, who, in a letter to the editor (1981; 125: 958), stated: "It appears that successful programs need both an educational component and a clinic to provide contraception and individual counselling."

Nadelson's paper also states, in contrast to Murray's position, that "ambivalence towards pregnancy and denial of the possibility that it could occur and inability to take responsibility for contraception point to the need for more comprehensive educational and counselling programs that take psychosocial and developmental factors into account". Nadelson found that only 5% of adolescents cited schools as the primary source of sexual information, compared with 46% who cited friends and 28% who reported parents and relatives as the primary source. Nadelson also indicated that "adolescents who report having had sex information courses at school scored significantly higher on the factual section of the questionnaire". However, Nadelson cautions, this group included girls at a maternity home and mothers' clinic, who were involved in sex education courses. There was considerable variation in what was perceived as a sex education course — "from high school biology with extensive sex information to a mere mention of sexuality in a health course".

A consensus should be sought on appropriate training for physicians dealing with sexual health, a definition of "sex education" and a basic curriculum.

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## Smoking and physicians

*To the editor:* The article by Drs. Paula J. Stewart and Walter W. Rosser (*Can Med Assoc J* 1982; 126: 1051–1054) concludes that informal advice to promote nonsmoking is ineffective. There are, however, other means available to physicians as individuals or as a group that may be more efficacious.

Physicians who smoke should try to stop. A survey sponsored by the American Cancer Society showed that nonsmoking physicians promoted nonsmoking more aggressively than smoking physicians.[1] This obvious conclusion should increase the present trend for physicians to represent a disproportionately small percentage of smokers.[1]

Taxes on cigarettes should be increased. Richard Ebert has described the decrease in gin consumption after heavy taxes were introduced in the 18th century.[2] Medical associations should push for increased taxes to be levied on cigarettes, with the income to be used for cancer research.

Medical associations should also call for a ban on all cigarette advertising.

Teenagers, especially young women, are smoking in ever-increasing numbers.[3] Many young people start to smoke because of the influence of cigarette advertising.

I recently had an article on smoking published. The newspaper in which it appeared excluded my call for a ban on cigarette advertising.

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## Estrogen replacement therapy, hot flushes and breast cancer

*To the editor:* There is little doubt that long-term estrogen replacement therapy causes endometrial cancer.[1-3] Recently we reported that in high doses it also increases the risk of breast cancer.[4] We think that these findings make it imperative that we re-evaluate the indications for such therapy.

Although estrogen replacement therapy appears to be partially effective in the treatment of hot flushes, the mechanism for the development of this problem remains undetermined. Hot flushes have long been linked to falling estrogen levels in the blood, although this mechanism has been disputed in recent years.[5] Two factors associated with estrogen status are the Quetelet index and ovarian status. We looked at the association of these factors with hot flushes, using data gathered as part of our case–control study of the relation between estrogen replacement therapy and breast cancer.

The study subjects were drawn from two predominantly white, affluent retirement communities near Los Angeles. One nurse–epidemiologist interviewed 131 women with breast cancer (aged 50 to 74 years at the time of diagnosis) and 262 age-matched control subjects. Nearly two thirds of both groups (63% and 62% respectively) reported having had hot flushes; therefore, the two groups were combined.

We found no association between hot flushes and weight, the Quetelet index, type of menopause or age at the last menstrual period (Table I). None the less, women with hot flushes were nearly four times as likely to have received estrogen replacement therapy as those without this symptom.

Table I—Frequency of hot flushes in 393 women grouped according to factors associated with estrogen status

| Factor | Hot flushes: Yes | Hot flushes: No | Risk ratio |
|---|---|---|---|
| Weight (lb) | | | |
| < 120 | 57 | 31 | 1.00 |
| 120–139 | 96 | 59 | 0.88 |
| 140+ | 90 | 56 | 0.87 |
| Quetelet index* | | | |
| < 30 | 67 | 47 | 1.00 |
| 31–33 | 81 | 36 | 1.58 |
| 34+ | 96 | 63 | 1.07 |
| Surgical menopause with oophorectomy | | | |
| No | 196 | 109 | 1.00 |
| Yes | 44 | 30 | 0.82 |
| Age at last menstrual period (yr) | | | |
| < 45 | 69 | 42 | 1.00 |
| 45–49 | 67 | 31 | 1.32 |
| 50–54 | 67 | 52 | 0.78 |
| 55+ | 36 | 21 | 1.04 |
| Estrogen therapy | | | |
| No | 49 | 72 | 1.00 |
| Yes | 196 | 3 | 3.95† |

*Weight in kilograms ÷ height in centimetres × 100.
†Significantly greater at $P < 0.001$.

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## The "limitations" of medicine

*To the editor:* I believe that the thesis of Dr. Trevor Hancock's editorial on the soft health path (*Can Med Assoc J* 1982; 126: 1019–1020) is based on a total misconception of the role of medicine. For some reason he has adopted the belief that practitioners of medicine and surgery are responsible for the health of the community. This is not so and has never been claimed to be so.

Physicians and surgeons are involved primarily in the treatment of disease and secondarily in the institution of some technical preventive medicine — for example, immunization.

Practitioners of medicine and surgery are popular objects for attack, and one of the more subtle forms of attack is to criticize them for not improving the health of the community. An example is Dr. Hancock's statement that "physicians and the general public are becoming increasingly aware of the limitations of medicine". I suggest that these "limitations" are artificially described by people who do not understand the proper role of practitioners of medicine and who want to make some marks by being critical.

It is true to say that doctors have always wished that the general public would improve its lifestyle so as to improve its health. For centuries physicians have advised proper health maintenance with little response from the general public. It is not fair for the profession to be criticized for the poor health standards of the community, and it is unfortunate when a member of our profession follows this line.

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## Acute intoxication with lindane

*To the editor:* I would like to comment on the article by Drs. Telch and Jarvis "Acute intoxication with lindane (gamma benzene hexachloride)" (*Can Med Assoc J* 1982; 126: 662–663).

In their recommendations the authors say that lindane should be washed off "by bathing after 6 hours". I believe it is sheer fallacy to think that the absorbed levels of lindane will be diminished by washing after 6 hours. To my knowledge there has never been a study that supports their view. Instructing patients to wash after 6 hours does nothing to diminish absorption and will give physicians a false sense of security.

The authors also say that "for infants and preschoolers alternative drugs include crotamiton, benzyl benzoate and sulfur". According to Rasmussen[1] benzyl benzoate "is as much of an unknown quantity as crotamiton". It seems unusual, therefore, to suggest this drug as a safer alternative to lindane since ingestion of benzyl benzoate may also produce convulsions.

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